

THE DIFFERENTIAL RELATIONSHIPS OF SHAME-PRONENESS AND GUILT-PRONENESS TO PSYCHOLOGICAL AND SOMATIZATION SYMPTOMS

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Historically, much attention has been focused on the role of guilt in psychopathology. However, recent theorists have posited that the association between guilt and psychopathology may be better accounted for by shame or by the overlapping features of guilt and shame. The current investigation assessed the relationships of shame-proneness versus guilt-proneness to psychological symptoms, somatization symptoms, attributional style, and concealment ($n = 156$). The shared variance between shame-proneness and guilt-proneness and the unique component of shame-proneness were related to both psychological and somatization symptoms, whereas the unique component of guilt-proneness was not related to these measures. Further, increased shame-proneness was associated with making depressogenic attributions, whereas guilt-proneness was not. Concealment was found to mediate the relationship between shame-proneness and psychological symptoms. These findings provide further evidence that the association between guilt and symptoms is accounted for by shame. Future research into concealment and other mechanisms by which shame influences symptoms is needed.

A great deal of empirical attention has focused on guilt and its association with a range of psychological symptomatology, including depression, anxiety, and posttraumatic stress disorder (PTSD; e.g., Henning &

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Frueh, 1997, Kubany et al., 1995; Kubany et al., 1996; Fontana, Rosenheck, & Brett, 1992). Indeed, these associations have been so firmly established that the DSM-IV defines guilt as a symptom of depression and an associated feature of PTSD (APA, 1994). However, recent research suggests that the associations between guilt and psychological symptomatology might be due to the common factor shared by guilt and shame, rather than guilt per se (e.g., Tangney, Wagner, & Gramzow, 1992). This article investigates the differential relationships of shame-proneness and guilt-proneness to psychological and stress-related physical health (i.e., somatization) symptoms.

Based on Lewis's (1971) conceptualization of the distinctions of shame and guilt, Tangney and colleagues (Tangney et al., 1992; Tangney, Burggraf, & Wagner, 1995) suggest that while both guilt and shame involve negative affective reactions and negative self-evaluations, the focus and scope of these reactions differ. A guilt reaction focuses on a specific behavior or transgression. This behavior is evaluated negatively and is often associated with feelings of tension, remorse, regret over bad things that were done, and a desire to make reparations. In contrast, a shame reaction focuses on scrutinizing and criticizing the entire self. While a specific behavior may instigate a shame reaction, this behavior is experienced as a symptom of a "bad self" thereby fostering painful feelings of disgrace and humiliation, a sense of worthlessness, a belief in public disapproval, and a desire to hide or disappear.

Empirical evidence has demonstrated that both guilt-proneness and shame-proneness are associated with negative psychological outcomes (Tangney et al., 1992; Kubany et al., 1995; see Tangney et al., 1995 for a review). However, when investigations measure both emotional reactions in order to account for the shared variance between the two, most studies identify either the shared variance between guilt and shame or the unique variance of shame as the reaction associated with negative outcomes (e.g., Harder, Cutler, & Rockart, 1992; Tangney et al., 1992; Tangney et al., 1995). In the majority of studies, guilt-proneness that is independent of shame-proneness has demonstrated no relationship or an inverse relationship to negative psychological symptoms. In contrast, shame-proneness that is independent of guilt-proneness has been linked to symptoms of psychological distress, anxiety, depression, anger, and PTSD (e.g., Tangney et al., 1992; Hoglund & Nicholas, 1995; Street & Arias, 2001; Leskela, Dieperink, & Thuras, 2002; see Harder et al., 1992; Alexander, Brewin, Vearnals, Wolff, & Leff, 1999 for exceptions).

The results from studies examining the relative influence of shame and guilt on physical health symptoms have been contradictory. For example, when examining somatization, researchers have found that *nei-*

ther shame nor guilt is independently related to symptoms (Tangney et al., 1992, study 1), that *only* shame exerts an independent effect on symptoms (Tangney et al., 1992, study 2), and that *only* guilt exerts an independent effect on symptoms (Harder et al., 1992). In the only study examining the effects of induced shame and guilt on immune functioning, researchers found that shame but not guilt was related to elevations in preinflammatory cytokine activity, an immunological effect with the potential to have negative long-term health impacts (Dickerson, Kemeny, Aziz, Kim, & Fahey, 2004). Given these disparate findings, more research is needed to clarify the impact of shame- and guilt-proneness on physical health symptoms, in particular those related to somatization symptoms because of their association with psychological distress.

A theoretical understanding of the relationships between shame-proneness, guilt-proneness and psychological and somatization symptoms may be informed by the extensive literature on the relationship between attributional style and depression (e.g., Abramson, Seligman, & Teasdale, 1978; Abramson, Metalsky, & Alloy, 1989). According to the learned helplessness and hopelessness models of depression, depressed individuals are characterized by having internal, stable, and global attributions for negative events. That is, when confronted with negative events, depressed individuals are more likely to blame themselves for the event (internal attribution), and to view the cause of the event as consistent over time (stable attribution) and generalizable across situations (global attribution). Based on the theoretical distinction between the emotional reactions of shame and guilt (Tangney et al., 1992; Tangney et al., 1995), one would hypothesize that both emotions would be characterized as involving internal attributions. However, the two emotions would differ in that shame would involve global and stable attributions, whereas guilt would involve specific and unstable attributions.

The limited research assessing the relationships of shame-proneness and guilt-proneness to attributional style has shown mixed results. Tangney et al. (1992) assessed how shame and guilt related to the different components of attributional style and found that proneness to experience shame was associated with a tendency to make internal, stable, and global attributions for negative events, whereas the results for guilt-proneness were more mixed. Guilt-proneness was associated with globality and internality (in two of three studies), but unrelated to stability; however, part correlational analyses revealed that these correlations resulted from the shared variance with shame and not the unique component of guilt. Similarly, Alexander and colleagues (1999) also found that guilt independent of shame was unrelated to depressogenic

attributional style. However, they found that shame independent of guilt was only related to making stable attributions for negative events and not internal or global attributions. The authors noted that these null results may be due to a ceiling effect resulting from a five-item shame measure. Due to the mixed results and methodological limitations, further research is warranted in testing the relationships between shame-proneness, guilt-proneness, and the tendency to make internal, stable, and global attributions.

Regardless of the similarities between shame-proneness and the depressogenic attributional style, the psychological mechanisms responsible for the link between shame-proneness and psychological symptomatology are not well understood. One factor that may help us to understand this relationship is concealment. As discussed previously, the experience of shame is characterized by a desire to hide, disappear, and avoid exposure to others (Tangney et al., 1992; Tangney et al., 1995). Accordingly, shame-proneness may be related to a person's tendency to conceal personally distressing information from others, which, in turn, may be related to increased symptomatology. While the relationship between shame-proneness and concealment has received limited empirical attention, Farber and Hall (2002) reported that, among a sample of therapy clients, clients who were more shame-prone were less likely to disclose issues associated with negative affect to their therapists.

Actively concealing negative personal information from others is associated with both physical and psychological symptoms. Concealment has been shown to account for unique variance in physical and psychological symptoms even after controlling for the occurrence of a traumatic event, trauma-related distress, disclosure of the trauma, self-disclosure, social support, and social network strength (Larson & Chastain, 1990). Although concealment involves more than simply lack of disclosure, the extensive literature on disclosure and health may be informative in understanding the potential relationship between concealment and health. Disclosure has a demonstrated relationship with increased psychological well-being, reported health, physiological functioning, and general functioning (see Pennebaker, 1995; Smyth, 1998 for reviews). In several studies that randomized participants to write either about a traumatic event that they have not shared with many people or a neutral topic, participants in the disclosure condition have been shown to have improved immune functioning, drops in physician visits for illness, and better performance at work and school (e.g., Esterling, Antoni, Fletcher, Margulies, & Schneiderman, 1994; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Petrie, Booth, Pennebaker, Davison, &

Thomas, 1995; Richards, Beal, Seagal, & Pennebaker, 2000; see Pennebaker, 1995; Smyth, 1998 for reviews).

Given the existing gaps in the literature, the primary aim of the current study was to replicate and extend the studies assessing the characteristics of shame-proneness and guilt-proneness. Specifically, we hypothesized that both shame-proneness and guilt-proneness would positively correlate with psychological and somatization symptoms, along with depressogenic attributional style. Additionally, shame independent of guilt, but not guilt independent of shame, was hypothesized to correlate with these measures. A secondary aim of the current study was to investigate the role of concealment as a potential mechanism of the relationships between shame-proneness and psychological and somatization symptomatology. Concealment was hypothesized to mediate the relationships between shame-proneness and symptomatology.

METHOD

PARTICIPANTS

One hundred and fifty-six female undergraduate students enrolled in introductory psychology classes participated in this study in partial fulfillment of a research requirement. Participants ranged in age from 18 to 29 years ($M = 18.74$, $SD = 2.16$). The majority of participants reported their race as White/Caucasian (74%). The remaining women reported their race as Asian or Pacific Islander (10%), Latino (5%), African American (3%), Native American (1%), or self-identified as "other" (7%).

PROCEDURE AND MEASURES

Participants completed a consent form and questionnaire packet. At the end of the session, the participants were debriefed and thanked for their participation. The questionnaire packet consisted of the measures discussed below.

Test of Self-Conscious Affect (TOSCA; Tangney, Wagner, & Gramzow, 1989). The TOSCA consists of 15 brief scenarios (e.g., "You make a mistake at work and find out a coworker is blamed for the error") followed by several brief descriptions of possible reactions. It was designed to assess a person's tendency to respond to various situations with shame, guilt, externalization, detachment/unconcern, and pride. Participants use a five-point scale (ranging from 1 "completely unlikely" to 5 "extremely likely") to rate the likelihood that they would react to the scenario in each of the manners. Of particular relevance to the current investigation are the tendency to respond with shame (i.e.,

shame-proneness; e.g., "You would keep quiet and avoid the coworker") and the tendency to respond with guilt (i.e., guilt-proneness; e.g., "You would feel unhappy and eager to correct the situation"). The shame-proneness and guilt-proneness subscales have been shown to have adequate levels of test-retest reliability ($r_{tt} = .85$ and $r_{tt} = .74$, respectively) and internal consistency ($\alpha = .76$ and $\alpha = .66$, respectively) (Tangney et al., 1989; Tangney et al., 1992). Tangney (1996) argued that these internal reliability coefficients may be underestimated due to the situational variance inherent in a scenario approach. In the current study, the internal consistency estimates were similar ($\alpha = .70$ for shame-proneness; $\alpha = .73$ for guilt-proneness).

Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983). The BSI is a 53-item self-report inventory that measures the degree to which participants have experienced different psychological symptoms in the past week. Items are rated on a five-point scale ranging from 0 ("not at all") to 4 ("extremely"). The BSI has nine subscales and one general severity index (GSI) that provides a summary measure of total symptomatology. Because several BSI subscales were highly intercorrelated in the current study and there is evidence supporting the BSI as a measure of one general distress factor (e.g., Boulet & Boss, 1991), we report only the GSI subscale score in the current investigation. The BSI subscales have been shown to have high internal consistency (α ranging from .71–.85) and test-retest reliability (r_{tt} ranging from .68–.91) (Derogatis & Melisaratos, 1983). In the current study, the internal consistency of the GSI was high ($\alpha = .93$).

PTSD Checklist (PCL; Weathers, Litz, Huska, & Keane, 1994). The PCL is a 17-item checklist that provides a continuous measure of PTSD. Items are rated on a five-point scale ranging from 1 ("not at all") to 5 ("extremely"). The PCL has been shown to have good internal consistency ($\alpha = .97$) and to be stable over time ($r_{tt} = .96$) (Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL also correlates with other measures of PTSD (Mississippi Scale, $r = .93$; PK PTSD scale of the MMPI-2, $r = .77$) (Newman, Kaloupek, & Keane, 1996). In the current study, the internal consistency of the PCL was similar ($\alpha = .90$).

Pennebaker Inventory of Limbic Languidness (PILL; Pennebaker, 1982). The PILL is a 54-item inventory used to collect frequency information about physical symptoms commonly associated with stress (e.g., "lump in throat," "upset stomach," "back pain"). Participants are instructed to rate the frequency with which they experience each symptom on a five-point scale ranging from 0 ("have never or almost never experienced the symptom") to 4 ("more than once every week"). The PILL is scored by summing responses on each item (range 0–220). This measure has been shown to have good internal consistency ($\alpha = .91$) and to be reli-

able over time ($r_{tt} = .83$; Pennebaker, 1982). In the current study, the internal consistency was similar ($\alpha = .92$).

Attributional Style Questionnaire (ASQ; Seligman, Abramson, Semmel, & von Baeyer, 1979). The ASQ measures the tendency to select certain causal explanations for the occurrence of positive and negative events. Participants are asked to imagine 12 (six positive and six negative) hypothetical events (e.g., "You go out on a date and it goes badly.") and write down one major cause. Then, they are asked to rate the locus of the cause (i.e., "Is the cause of your date going badly due to something about you or something about other people or circumstances?"), the stability of the cause (i.e., "In the future when you are dating, will this cause again be present?"), and the globality of the cause (i.e., "Is this cause something that just influences dating or does it also influence other areas of your life?"). Items are rated on seven-point scales that are anchored such that external, unstable, and specific attributions receive lower scores and internal, stable, and global attributions receive higher scores. Separate scores are derived for positive and negative events. Only attributions for negative events were analyzed in the current study. Peterson et al. (1982) found only modest reliability (α ranging from .46–.69) and stability (r_{tt} ranging from .57–.69, $ps < .05$) for the individual scales of the ASQ (internal, stable, and global scores for negative events). In the current study, the internal consistency of the scales was similar ($\alpha = .35$ for internal, $\alpha = .65$ for stable, $\alpha = .68$ for global). As discussed in relation to the TOSCA, these alpha levels may be underestimated due to the situational variance inherent in a scenario approach (Tangney, 1996).

Self-Concealment Scale (SCS; Larson & Chastain, 1990). The SCS is a ten-item measure of an individual's tendency to actively conceal from others personal information that is perceived as negative or threatening (e.g., "I have negative thoughts about myself that I never share with anyone."). Participants are asked to rate the degree to which they agree with each statement on a five-point scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). This measure has been shown to have high internal consistency (α ranging from .83–.87) and to be reliable over time ($r_{tt} = .74$; Cramer & Barry, 1999). In the current study, the internal consistency of the SCS was similar ($\alpha = .85$).

RESULTS

CHARACTERISTICS OF SHAME-PRONENESS AND GUILT-PRONENESS

As shown in Table 1, a series of correlation coefficients were computed to examine the relationships of shame-proneness and guilt-proneness

to psychological and somatization symptoms. Both shame-proneness and guilt-proneness were significantly related to higher levels of both PTSD symptoms and somatization symptoms, whereas only shame-proneness was significantly related to higher levels of psychological symptoms. To assess if the effects of shame-proneness on symptom levels remained significant even when controlling for the effects of guilt-proneness, we conducted three simultaneous regression equations in which shame-proneness and guilt-proneness were regressed on each symptom measure. For psychological symptoms, the overall regression equation was significant, with shame-proneness and guilt-proneness accounting for 5% of the variance in psychological symptoms [$F(2,153) = 4.23, p < .05$]. Additionally, as predicted, shame-proneness was a significant independent predictor of psychological symptoms [$\beta = .23, t(153) = 2.61, p < .05$], whereas guilt-proneness was not ($t < 1$). For PTSD and somatization symptoms, results were similar with the overall regression equations significant [$R^2 = .10, F(2,149) = 8.43, p < .001$ for PTSD; $R^2 = .10, F(2,153) = 8.30, p < .001$ for somatization symptoms]. Further, shame-proneness was a significant predictor of both PTSD symptoms [$\beta = .30, t(149) = 3.52, p < .01$] and somatization symptoms [$\beta = .27, t(153) = 3.20, p < .01$], whereas guilt-proneness was not (t 's < 1).

We also hypothesized that shame-proneness and guilt-proneness would relate differently to attributional style variables. As predicted, both shame-proneness and guilt-proneness were significantly related to the tendency to make internal attributions for negative events, whereas shame-proneness, but not guilt-proneness, was significant in predicting a stable and global attributional style for negative events (see Table 1). In simultaneous multiple regression equations, shame-proneness and guilt-proneness accounted for 6% of the variance of internality [$F(2,153) = 4.81, p < .05$], 7% of the variance of stability [$F(2,153) = 5.44, p < .01$], and 7% of the variance of globality [$F(2,153) = 5.58, p < .01$]. Further, shame-proneness significantly predicted these variables [$\beta = .17, t(153) = 2.02, p < .05$ for internality; $\beta = .25, t(153) = 2.96, p < .01$ for stability; $\beta = .24, t(153) = 2.76, p < .01$ for globality] whereas guilt-proneness did not [$t(153)$'s $< 1.30, ns$].

Finally, having a tendency to conceal negative events was found to be related to shame-proneness, but not guilt-proneness (see Table 1). In a simultaneous multiple regression equation, shame-proneness and guilt-proneness accounted for 17% of the variance of concealment [$F(2,153) = 15.11, p < .001$]. Further, shame was a significant *positive* predictor of concealment [$\beta = .45, t(153) = 5.49, p < .001$] and guilt was a sig-

TABLE 1. Correlations of Shame- and Guilt-proneness with Measures of Psychological Symptoms, Somatization Symptoms, Attributional Style, and Concealment.

Measure	Shame-proneness	Guilt-proneness
Psychological Symptoms	.23**	.10
Somatization Symptoms	.30**	.19*
PTSD Symptoms	.32***	.16*
Internal Attributions	.22**	.19*
Stable Attributions	.26***	.11
Global Attributions	.26***	.15
Concealment	.38***	.02

$N = 156$, * $p < .05$, ** $p < .01$, *** $p < .001$.

nificant *negative* predictor of concealment [$\beta = -.16$, $t(153) = -2.00$, $p < .05$], indicating that *more* guilt predicted *less* concealment.

Does concealment mediate the relationships between shame-proneness and psychological and somatization symptoms? Concealment was examined as a mediator of the relationship between shame-proneness and psychological symptoms using a series of regression equations recommended by Baron and Kenny (1986). First, shame-proneness was found to significantly predict concealment ($\beta = .38$, $t = 5.07$, $p < .001$). Additionally, shame-proneness was shown to be a significant predictor of psychological symptoms ($\beta = .23$, $t = 2.92$, $p < .01$). Next, shame-proneness and concealment were regressed on psychological symptoms, and this equation was significant ($R^2 = .08$, $F(2,153) = 6.74$, $p < .01$). In this equation, concealment significantly predicted psychological symptoms ($\beta = .18$, $t = 2.19$, $p < .05$), whereas shame-proneness was no longer a significant predictor ($\beta = .16$, $t = 1.91$, *ns*). Thus, concealment was found to fully mediate the relationship between shame-proneness and psychological symptoms and this was confirmed by Sobel's (1982) test for mediation ($z = 2.01$, $p < .05$).

Concealment was also tested as a mediator of the relationship between shame-proneness and PTSD symptoms. As discussed previously, shame-proneness was found to significantly predict concealment ($\beta = .38$, $t = 5.07$, $p < .001$). Additionally, shame-proneness was shown to be a significant predictor of PTSD symptoms ($\beta = .32$, $t = 4.09$, $p < .001$). Next, shame-proneness and concealment were regressed on PTSD symptoms, and this equation was significant [$R^2 = .14$, $F(2,151) = 12.44$, $p < .001$]. In this equation, both concealment ($\beta = .23$, $t = 2.72$, $p < .01$) and shame-proneness ($\beta = .23$, $t = 2.76$, $p < .01$) significantly predicted PTSD

symptoms. Therefore, concealment partially mediated the relationship between shame-proneness and PTSD symptoms. Sobel's (1982) test for mediation confirmed that concealment reliably mediated the relationship between shame-proneness and PTSD symptoms ($z = 2.40, p < .05$).

Finally, concealment was examined as a mediator of the relationship between shame-proneness and somatization symptoms. Although shame-proneness was found to be a significant predictor of somatization symptoms ($\beta = .31, t = 3.96, p < .001$), concealment did not emerge as a significant predictor of somatization symptoms in a multiple regression equation with shame-proneness and concealment regressed on somatization symptoms. Accordingly, concealment cannot mediate the relationship between shame-proneness and somatization symptoms.

DISCUSSION

In the current investigation, we attempted to elucidate the differential relationships of shame- versus guilt-proneness to both psychological and somatization symptoms. Further, in an effort to better understand these differential relationships, depressogenic attributional style was assessed in relation to these variables and concealment was investigated as a potential mechanism for the relationships between shame-proneness and psychological and somatization symptoms.

Shame-proneness and guilt-proneness appear to differ in their relationships to psychological and somatization symptoms. Shame-proneness (both with and without controlling for guilt) was significantly related to psychological symptoms, whereas guilt-proneness was not. Further, although both shame-proneness and guilt-proneness were significantly related to PTSD symptoms, only shame-proneness independent of guilt, but not guilt-proneness independent of shame, was associated with PTSD symptoms. Therefore it appears that the observed relationships between guilt-proneness with PTSD symptoms may be explained by a factor common to both shame and guilt, rather than the unique contribution of guilt per se. These results replicate the findings that the shared component of shame-proneness and guilt-proneness, along with the independent contribution of shame-proneness, are related to psychological symptoms, whereas guilt-proneness independent of shame is not related to symptoms (e.g., Tangney et al., 1992).

The results of the current study suggest that a similar pattern of results may apply to somatization symptoms as well. Although both shame- and guilt-proneness were significantly related to somatization symptoms, only shame-proneness independent of guilt, but not guilt-prone-

ness independent of shame, was associated with somatization symptoms. Thus, similarly to the results for psychological symptoms, these results suggest that both the shared component of shame- and guilt-proneness and the independent contribution of shame-proneness are related to a greater number of somatization symptoms. In contrast, the independent contribution of guilt-proneness was not related to this measure. This pattern of results adds to a small body of literature in which there are conflicting findings regarding the relative relationships of shame-proneness versus guilt-proneness to somatization symptoms.

One important difference between studies that have and have not found shame to be related to somatization symptoms is the methodology employed. The studies that have found shame-proneness to be related to somatization symptoms (Tangney et al., 1992, study 2; and the current investigation) have used the Test of Self-Conscious Affect (TOSCA; Tangney et al., 1989). In contrast, different measures of shame and guilt were used in the other investigations on this topic (Personal Feelings Questionnaire-2 (PFQ-2) used by Harder et al., 1992; Self-Conscious Affect and Attribution Inventory (SCAAI) used by Tangney et al., 1992, study 1). Because the TOSCA is a later revision based on the SCAAI (Tangney, Burgraff, Hamme, & Domingos, 1988), it is probable that results from studies using the TOSCA are more representative of the constructs of shame-proneness and guilt-proneness as defined by Tangney and colleagues. Further, it is possible that the different findings may be due to the types of measures employed. The TOSCA is a scenario-based scale and the PFQ-2 (Harder & Zalma, 1990) is a checklist measure. Tangney (1996) outlined several advantages of scenario-based measures as compared to checklist measures of shame- and guilt-proneness. First, scenario-based measures assess situation-specific descriptions of shame and guilt, whereas checklist measures rely on participants to make the difficult abstract distinction between "shame" and "guilt." Second, Tangney (1996) argued that the use of a scenario approach may be less likely to "arouse defensive response biases" because participants are not required to "bluntly acknowledge global tendencies to experience shame and guilt."

However, there are also limitations of using the TOSCA as our only measure of shame- and guilt-proneness. While scenario-based measures such as the TOSCA have many benefits, such measures also tend to have relatively low internal consistency and therefore may have questionable validity. Further, Tangney's conceptualization of the relationship between guilt and depression differs from the conceptualization of some other clinicians and researchers (e.g., Ferguson & Crowley, 1997; Harder, 1995; Kugler & Jones, 1992) in their ideas regarding the relationship of guilt to depression. Whereas Tangney and colleagues would not

expect guilt-proneness to relate to depression (Tangney et al., 1992; Tangney et al., 1995), others note that guilt is a prominent feature of depression (Ferguson & Crowley, 1997; Harder, 1995; Kugler & Jones, 1992). It is not surprising that measures reflecting these differing conceptualizations of guilt reflect the mixed results; the Guilt Inventory (GI; Kugler & Jones, 1992) and the PFQ-2 (Harder & Zalma, 1990) have been shown to be significantly related to psychopathology such as depression (Harder, 1995), whereas the TOSCA-guilt scale has not been found to be related to psychopathology. Additionally, in a confirmatory factor analysis of guilt and shame measures including the GI and PFQ-2, TOSCA-guilt was the only guilt measure that did not load onto the latent guilt factor (Ferguson & Crowley, 1997). Therefore, it appears that the TOSCA-guilt scale may be reflective of a different construct than that measured by guilt measures such as the PFQ-2 and GI. Kugler and Jones (1992) suggest that the TOSCA measures "moral standards guilt" (i.e., wanting to correct one's actions that conflict with one's moral values), whereas the PFQ-2 and GI measure "affective guilt" (i.e., the emotional experience of guilt). However, it is also possible that the PFQ-2 and GI may be confounding the constructs of shame and guilt and that may account for the relationship between guilt and psychopathology when using these measures. Regardless, because of the differences in the conceptualization and measurement of guilt, the results of the current study may only apply to the guilt construct as conceptualized by Tangney and colleagues and not the guilt construct as conceptualized by others.

In addition to examining the differential relationships of shame- versus guilt-proneness to symptom measures, we were also interested in how shame- and guilt-proneness related to depressogenic attributional style. Whereas the tendency to make internal attributions for negative events was related to both shame- and guilt-proneness, the tendency to make global and stable attributions were significantly related to shame-proneness, but not guilt-proneness. Further, shame-proneness independent of guilt, but not guilt-proneness independent of shame, was related to making internal, stable, and global attributions. According to Tangney and colleagues' definitions of shame and guilt, both emotional reactions involve a tendency to make negative self-evaluations. Therefore, it is not surprising that both shame-proneness (with or without controlling for guilt-proneness) and guilt-proneness (with or without controlling for shame-proneness) were associated with an internal attributional style for negative events. In contrast, shame-proneness, but not guilt-proneness, was related to the tendency to make stable and global attributions for negative events. These findings are congruent with Tangney et al.'s (1992) definition of shame as focusing on scruti-

nizing the entire self and guilt as focusing on specific behaviors. Further, the extensive literature on depressogenic attributional style may provide some insight into the relationship of shame-proneness independent of guilt, but not guilt-proneness independent of shame, to psychopathology. Specifically, as internal, global, and stable attributions about negative events have been shown to be associated with depression and anxiety, this may at least partially explain why the unique component of shame-proneness but not guilt-proneness is associated with psychological distress.

In addition to relating depressogenic attributional style to shame-proneness to help inform our understanding of the relationship between shame-proneness and symptom elevations, we were interested in exploring concealment as a potential mediator of these relationships. Shame-proneness, but not guilt-proneness was significantly related to concealment. Further, shame-proneness independent of guilt was significantly related to *increased* concealment, whereas guilt-proneness independent of shame was related to *decreased* concealment. These findings may be a consequence of the desire to hide associated with shame and the desire to make reparations associated with guilt.

Concealing personal information from others was found to fully mediate the relationship between shame-proneness and psychological symptoms and partially mediate the relationship between shame-proneness and PTSD symptoms. However, concealment did not mediate the relationship between shame-proneness and somatization symptoms. Therefore, this type of concealment is one potential mechanism of the relationship between shame-proneness and psychological symptoms. Shame-proneness may contribute to avoidance of speaking about certain issues that, in turn, may prevent individuals from engaging in the emotional processing that may be necessary to resolve certain life issues.

It is important to note several limitations of the present research. First, due to the correlational nature of this study, no firm conclusions can be made about the causality of shame-proneness, concealment, and psychological symptoms. In fact, it is likely that these variables are interrelated and exert influence on each other. However, because shame-proneness is conceptualized as an enduring trait and psychological symptoms are more transitory, we believe that a model in which shame-proneness leads to concealment which, in turn, leads to psychological symptoms, is a likely causal pathway. A second limitation of the current investigation is the use of a female-only university sample with relatively low levels of distress. Therefore, replicating this study with both men and women and with a clinical population is an important avenue for future research. Further, in measuring PTSD symptoms, there

was no assessment of the event to which the PTSD scale was anchored. Therefore, it is impossible to determine if participants answered the questions in relation to an event that would meet DSM-IV criteria for a "traumatic event." As a result, the data involving PTSD symptoms may be best conceptualized as intrusion, avoidance, and arousal symptomatology rather than necessarily reflective of posttraumatic stress disorder. Another limitation, as discussed above, is our use of one measure of shame- and guilt-proneness. Because we did not include other measures of guilt, we were unable to test if our results could apply to other measures of guilt that may represent conceptualizations of guilt other than that of Tangney and colleagues.

The results of the current investigation may have implications for clinical practice. First and foremost, based on the observed association between shame-proneness and psychological and somatization symptoms, it is important for therapists to be aware of the necessity of assessing for shame in their patients. Because shame-proneness is associated with the tendency to conceal negative information about oneself, patients may not be forthcoming with their feelings of shame and it may be necessary for therapists to be vigilant for more subtle cues indicating the presence of shame and perhaps to ask questions pertaining to shame directly.

In addition to the importance of assessing for shame, it is possible that the prevention or reduction of concealment may be an important therapeutic mechanism. Psychotherapy has been shown to be effective in reducing a wide range of symptoms and, for many psychological diagnoses, one type of psychotherapy has not been shown to be significantly more effective than others (e.g., Smith, Glass, & Miller, 1980). As a result, many theorists and researchers have argued that nonspecific factors of therapy play a pivotal role in driving therapeutic change (e.g., Lambert & Bergin, 1994). Perhaps one common factor of psychotherapy, the prevention or reduction of concealment, may contribute to the benefits associated with psychological treatment by allowing for emotional processing of painful events. Additionally, through the prevention or reduction of concealment, psychotherapy may have beneficial effects on the individual's level of shame. For example, by demonstrating that the feared consequences (e.g., rejection or scorn) of disclosing information for which the individual feels shame do not ultimately occur, the person's shame may also decrease. As discussed previously, the beneficial effects of disclosure on both psychological and physical health have been demonstrated extensively (see Pennebaker, 1995; Smyth, 1998 for reviews). Unfortunately, although individuals who conceal personally distressing information have higher levels of distress, they also tend to have a more negative attitude toward counseling (Cramer, 1999; Kelly &

Achter, 1995). Therefore the tendency to conceal may actually prevent people from getting the help that they need.

To summarize, this study replicated earlier findings establishing both the common factor of shame- and guilt-proneness and the independent contribution of shame-proneness to be related to psychological symptoms and extended the earlier work by showing that a similar pattern of results may also apply to somatization symptoms as well as depressogenic attributional style. These differential relationships of shame- versus guilt-proneness to symptoms and attributional style may be related to the dissimilar cognitions, emotions, and behaviors evoked by each. Further, as concealment was found to mediate the relationship between shame-proneness and psychological symptoms, the tendency to conceal negative personal information is one potential explanatory factor of this relationship. The desire to hide and fear associated with others knowing shameful information may be important maintaining factors in psychopathology.

REFERENCES

- Abramson, L. Y., Metalsky, G., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review*, 96(2), 358–372.
- Abramson, L. Y., Seligman, M. E., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology*, 87(1), 49–74.
- Alexander, B., Brewin, C. R., Vearnals, S., Wolff, G., & Leff, J. (1999). An investigation of shame and guilt in a depressed sample. *British Journal of Medical Psychology*, 72, 323–338.
- American Psychiatric Association (APA). (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Boulet, J., & Boss, M. (1991). Reliability and validity of the Brief Symptom Inventory. *Psychological Assessment*, 3(3), 433–437.
- Cramer, K. M. (1999). Psychological antecedents to help-seeking behavior: A reanalysis using path modeling structures. *Journal of Counseling Psychology*, 46(3), 381–387.
- Cramer, K. M., & Barry, J. E. (1999). Psychometric properties and confirmatory factor analysis of the Self-Concealment Scale. *Personality and Individual Differences*, 27(4), 629–637.
- Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine*, 13(3), 595–605.
- Dickerson, S. S., Kemeny, M. E., Aziz, N., Kim, K. H., & Fahey, J. L. (2004). Immunological effects of induced shame and guilt. *Psychosomatic Medicine*, 66(1), 124–131.
- Esterling, B. A., Antoni, M. H., Fletcher, M. A., Margulies, S., & Schneiderman, N. (1994). Emotional disclosure through writing or speaking modulates latent Epstein–Barr virus antibody titers. *Journal of Consulting and Clinical Psychology*, 62(1), 130–140.

- Farber, B. A., & Hall, D. (2002). Disclosure to therapists: What is and is not discussed in psychotherapy. *Journal of Clinical Psychiatry*, 58(4), 359–370.
- Ferguson, T. J., & Crowley, S. L. (1997). Measure for measure: A multitrait-multimethod analysis of guilt and shame. *Journal of Personality Assessment*, 69(2), 425–441.
- Fontana, A., Rosenheck, R., & Brett, E. (1992). War zone traumas and posttraumatic stress disorder symptomatology. *Journal of Nervous & Mental Disease*, 180(12), 748–755.
- Harder, D. W. (1995). Shame and guilt assessment, and relationships of shame- and guilt-proneness to psychopathology. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 368–392). New York: The Guilford Press.
- Harder, D. W., Cutler, L., & Rockart, L. (1992). Assessment of shame and guilt and their relationships to psychopathology. *Journal of Personality Assessment*, 59(3), 584–604.
- Harder, D. W., & Zalma, A. (1990). Two promising shame and guilt scales: A construct validity comparison. *Journal of Personality Assessment*, 55, 729–745.
- Henning, K. R., & Frueh, B. C. (1997). Combat guilt and its relationship to PTSD symptoms. *Journal of Clinical Psychology*, 53(8), 801–808.
- Hoglund, C. L., & Nicholas, K. B. (1995). Shame, guilt, and anger in college students exposed to abusive family environments. *Journal of Family Violence*, 10(2), 1995.
- Kelly, A. E., & Achter, J. A. (1995). Self-concealment and attitudes toward counseling in university students. *Journal of Counseling Psychology*, 42(1), 40–46.
- Kubany, E. S., Abueg, F. R., Owens, J. A., Brennan, J. M., Kaplan, A. S., & Watson, S. B. (1995). Initial examination of a multidimensional model of trauma-related guilt: Applications to combat veterans and battered women. *Journal of Psychopathology and Behavioral Assessment*, 17(4), 353–376.
- Kubany, E. S., Haynes, S. N., Abueg, F. R., Manke, F. P., Brennan, J. M., & Stahura, C. (1996). Development and validation of the Trauma-Related Guilt Inventory (TRGI). *Psychological Assessment*, 8(4), 428–444.
- Kugler, K., & Jones, W. H. (1992). On conceptualizing and assessing guilt. *Journal of Personality and Social Psychology*, 62(2), 318–327.
- Lambert, M. J., & Bergin, A. E. (1994). The effectiveness of psychotherapy. In A. E. Bergin & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed., pp. 143–189). New York: Wiley.
- Larson, D. G., & Chastain, R. L. (1990). Self-concealment: Conceptualization, measurement, and health implications. *Journal of Social and Clinical Psychology*, 9(4), 439–455.
- Leskela, J., Dieperink, M., & Thuras, P. (2002). Shame and posttraumatic stress disorder. *Journal of Traumatic Stress*, 15(3), 223–226.
- Lewis, H. B. (1971). *Shame and guilt in neurosis*. New York: International Universities Press.
- Newman, E., Kaloupek, D. G., & Keane, T. M. (1996). Assessment of posttraumatic stress disorder in clinical and research settings. In B. A. van der Kolk & A. C. McFarlane (Eds.), *The effects of overwhelming experience on mind, body, and society* (pp. 242–275). New York: The Guilford Press.
- Pennebaker, J. W. (1982). *The psychology of physical symptoms*. New York: Springer-Verlag.
- Pennebaker, J. W. (1995). *Emotion, disclosure, & health*. Washington, DC: American Psychological Association.
- Pennebaker, J. W., Kiecolt-Glaser, J. K., & Glaser, R. (1988). Disclosure of traumas and immune function: Health implications for psychotherapy. *Journal of Consulting and Clinical Psychology*, 56(2), 239–245.
- Peterson, C., Semmel, A., von Baeyer, C., Abramson, L. Y., Metalsky, G., & Seligman, M. E. (1982). The Attributional Style Questionnaire. *Cognitive Therapy and Research*, 6(3), 287–300.
- Petrie, K. J., Booth, R. J., Pennebaker, J. W., Davison, K. P., & Thomas, M. G. (1995). Disclo-

- sure of trauma and immune response to a Hepatitis B vaccination program. *Journal of Consulting and Clinical Psychology*, 63(5), 787–792.
- Richards, J. M., Beal, W. E., Seagal, J. D., & Pennebaker, J. W. (2000). Effects of disclosure of traumatic events on illness behavior among psychiatric prison inmates. *Journal of Abnormal Psychology*, 109(1), 156–160.
- Seligman, M. E., Abramson, L. Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. *Journal of Abnormal Psychology*, 88(3), 242–247.
- Smith, M. L., Glass, G. V., & Miller, T. I. (1980). *The benefits of psychotherapy*. Baltimore, MD: Johns Hopkins University Press.
- Smyth, J. M. (1998). Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology*, 66(1), 174–184.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290–312). San Francisco: Jossey-Bass.
- Street, A. E., & Arias, I. (2001). Psychological abuse and posttraumatic stress disorder in battered women: Examining the roles of shame and guilt. *Violence and Victims*, 16(1), 65–78.
- Tangney, J. P. (1996). Conceptual and methodological issues in the assessment of shame and guilt. *Behavior Research and Therapy*, 34(9), 741–754.
- Tangney, J. P., Burggraf, S. A., Hamme, H., & Domingos, B. (1988). *The Self-Conscious Affect and Attribution Inventory (SCAAI)*. Unpublished instrument. Bryn Mawr College.
- Tangney, J. P., Burggraf, S. A., & Wagner, P. E. (1995). Shame-proneness, guilt-proneness, and psychological symptoms. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 343–367). New York: The Guilford Press.
- Tangney, J. P., Wagner, P. E., & Gramzow, R. (1989). *The Test of Self-conscious Affect*. Fairfax, VA: George Mason University.
- Tangney, J. P., Wagner, P. E., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology*, 101(3), 469–478.
- Weathers, F., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility*. Paper presented at the International Society for Traumatic Stress Studies, San Antonio, TX.
- Weathers, F., Litz, B. T., Huska, J. A., & Keane, T. M. (1994). *PTSD Symptom Checklist*. Boston, MA: National Center for PTSD, Behavioral Science Division.